Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claim 1 (previously presented). A photocurable composition comprising:

(a) an cationically curable compound;

(b) an acrylate-containing compound;

(c) a hydroxyl-containing compound;

(d) a cationic photoinitiator; and

(e) a free radical photoinitiator;

wherein said composition has less than 0.54 equivalents of cationically curable groups, less than 0.10 equivalents of acrylate groups and between less than 0.10 to about 0.03 equivalents of hydroxyl groups per 100 grams of said composition.

Claim 2 (original). The photocurable composition of claim 1, wherein said cationically curable compound is an epoxy-containing compound, and said cationically curable groups are epoxy groups.

Claim 3 (original). The photocurable composition of claim 2, wherein said epoxy-containing compound is a difunctional non-glycidyl epoxy.

Claim 4 (original). The photocurable composition of claim 3, wherein said difunctional non-glycidyl epoxy is cycloaliphatic.

Claim 5 (original). The photocurable composition of claim 4, wherein said cycloaliphatic difunctional non-glycidyl epoxy is 3,4-epoxycyclohexylmethyl-3',3'-epoxycclohexanecarboxylate.

Claim 6 (original). The photocurable composition of claim 1, wherein said acrylate-containing compound is a difunctional (meth)acrylate.

Claim 7 (original). The photocurable composition of claim 6, wherein said difunctional (meth)acrylate is aliphatic or aromatic.

Claim 8 (original). The photocurable composition of claim 7, wherein said difunctional (meth)acrylate is a bisphenol A-based epoxy diacrylate.

Claim 9 (original). The photocurable composition of claim 1, wherein said hydroxyl-containing compound is difunctional.

Claim 10 (original). The photocurable composition of claim 9, wherein said difunctional hydroxyl-containing compound is polyether polyol.

Claim 11 (original). The photocurable composition of claim 10, wherein said polyether polyol is a polytetramethylene glycol having a molecular weight of between 250 and 2000.

Claim 12 (original). The photocurable composition of claim 1, wherein said cationic photoinitiator is a mixture of S,S,S,S'-tetraphenylthiobis(4,1-phenylene)disulfonium dihexafluoroantimonate and diphenyl(4phenylthiophenyl)sulfonium hexafluoroantimonate.

Claim 13 (original). The photocurable composition of claim 1, wherein said free radical photoinitiator is a cyclohexyl phenyl ketone.

Claim 14 (original). The photocurable composition of claim 13, wherein said cyclohexyl phenyl ketone is 1-hydroxycyclohexyl phenyl ketone.

Claim 15 (original). The photocurable composition of claim 1, further comprising a reactive filler.

Claim 16 (original). The photocurable composition of claim 15, wherein said filler has a crosslinked polysiloxane core.

Claim 17 (original). The photocurable composition of claim 1, further comprising a stabilizer.

Claim 18 (original). The photocurable composition of claim 18, wherein said stabilizer is 2,6-di-tert-butyl-4-hydroxytoluene and/or N,N-dimethylbenzylamine.

Claim 19 (original). The photocurable composition of claim 1, which does not comprise any tri-functional or higher acrylates.

Claim 20 (original). The photocurable composition of claim 1, wherein said composition after imaging, curing and storage at 25° C and 50% relative humidity has a tensile strength that increases by less than about 21% over 51 days.

Claim 21 (original). The photocurable composition of claim 1, wherein said composition after imaging, curing and storage at 25° C and 50% relative humidity has a tensile modulus that increases by less than about 14% over 51 days.

Claim 22 (original). The photocurable composition of claim 1, wherein said composition after imaging, curing and storage at 25° C and 50% relative humidity has an elongation at break that decreases by less than 47% over 51 days.

Claim 23 (original). The photocurable composition of claim 1, wherein said composition has about 0.46 to about 0.51 equivalents of cationically curable groups per 100 grams of said composition.

Claim 24 (original). The photocurable composition of claim 1, wherein said composition has about 0.048 to about 0.080 equivalents of acrylate groups per 100 grams of said composition.

Claim 25 (original). The photocurable composition of claim 1, wherein said composition has about 0.03 equivalents of hydroxyl groups per 100 grams of said composition.

Claim 26 (cancelled).

Claim 27 (previously presented). A photocurable composition comprising:

(a) about 40% to about 80% by weight of a difunctional non-glycidyl epoxy;

(b) about 15% to about 35% by weight of a difunctional (meth)acrylate;

(c) about 10% to about 20% by weight of a difunctional hydroxyl-containing compound;

(d) a cationic photoinitiator; and

(e) a free radical photoinitiator

wherein said composition has less than 0.54 equivalents of cationically curable groups, less than 0.10 equivalents of acrylate groups and between less than 0.10 to about 0.03 equivalents of hydroxyl groups per 100 grams of said composition.

Claim 28 (original). The photocurable composition of claim 27, wherein said difunctional non-glycidyl epoxy is a cycloaliphatic epoxy.

Claim 29 (original). The photocurable composition of claim 28, wherein said cycloaliphatic difunctional non-glycidyl epoxy is 3,4-epoxycyclohexylmethyl-3',3'-epoxycclohexanecarboxylate.

Claim 30 (original). The photocurable composition of claim 27, wherein said difunctional (meth)acrylate is aliphatic or aromatic.

Claim 31 (original). The photocurable composition of claim 30, wherein said difunctional (meth)acrylate is a bisphenol A-based epoxy diacrylate.

Claim 32 (original). The photocurable composition of claim 27, wherein said difunctional hydroxyl-containing compound is polyether polyol.

Claim 33 (original). The photocurable composition of claim 32, wherein said polyether polyol is a polytetramethylene glycol having a molecular weight of between 250 and 2000.

Claim 34 (original). The photocurable composition of claim 27, wherein said cationic photoinitiator is a mixture of S,S,S,S'-tetraphenylthiobis(4,1-phenylene)disulfonium dihexafluoroantimonate and diphenyl(4phenylthiophenyl)sulfonium hexafluoroantimonate.

Claim 35 (original). The photocurable composition of claim 27, wherein said free radical photoinitiator is a cyclohexyl phenyl ketone.

Claim 36 (original). The photocurable composition of claim 35, wherein said cyclohexyl phenyl ketone is 1-hydroxycyclohexyl phenyl ketone.

Claim 37 (original). The photocurable composition of claim 27, further comprising 0 to 12% by weight of a glycidyl ether.

Claim 38 (original). The photocurable composition of claim 27, further comprising 0 to 10% by weight of a reactive filler.

Claim 39 (original). The photocurable composition of claim 38, wherein said filler has a crosslinked polysiloxane core.

Claim 40 (original). The photocurable composition of claim 27, further comprising a stabilizer.

Claim 41 (original). The photocurable composition of claim 40, wherein said stabilizer is 2,6-di-tert-butyl-4-hydroxytoluene and/or N,N-dimethylbenzylamine.

Claim 42 (original). The photocurable composition of claim 27, which does not comprise any tri-functional or higher acrylates.

Claim 43 (original). The photocurable composition of claim 27, wherein said composition after imaging, curing and storage at 25° C and 50% relative humidity has a tensile strength that increases by less than about 21% over 51 days.

Claim 44 (original). The photocurable composition of claim 27, wherein said composition after imaging, curing and storage at 25° C and 50% relative humidity has a tensile modulus that increases by less than about 14% over 51 days.

Claim 45 (original). The photocurable composition of claim 27, wherein said composition after imaging, curing and storage at 25° C and 50% relative humidity has an elongation at break that decreases by less than 47% over 51 days.

Claims 46-61 (cancelled).

Claim 62 (original). A paste comprising a curable reactive wax and the photocurable composition of claim 1.

Claim 63 (original). The paste of claim 62, wherein the curable, reactive wax includes a reactive moiety selected from the group consisting of hydroxyl, carboxyl, isocyanate, thiol, amino, epoxy, and vinyl.